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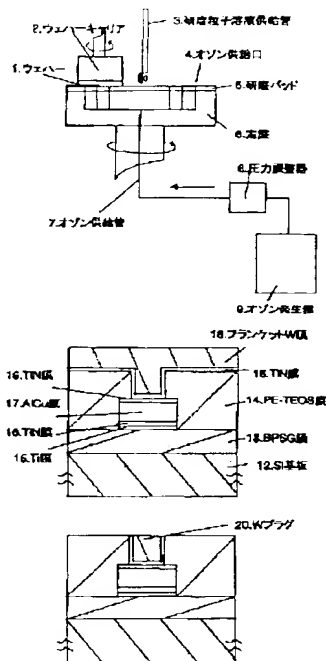
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TITLE : POLISHING OF METAL FILM AND
POLISHING DEVICE THEREOF



ABSTRACT : PROBLEM TO BE SOLVED: To prevent a metal film on the surface of a wafer from being contaminated and to maintain high polishing rate of polishing of the metal film by a method, wherein when the wafer is polished, a metal film formed in the wafer is oxidized using an oxidizing agent which does not contain metallic ions, and the oxidized metal film is removed using an abrasive containing abrasive particles.

SOLUTION: A wafer 1 is formed by a method wherein a BPSG film 13, a PE-TEOS film 14, a Ti film 15, a TiN film 16, an AlCu film 17 and a blanket W film 18 are laminated in this order on an Si substrate 12. The wafer 1 is held on a wafer carrier 2, the lower surface of the wafer 1 is brought into contact with a polishing pad 5 on a surface plate 6, and the wafer 1 is polished with an abrasive particle solution fed through an abrasive particle solution feed pipe 3 and ozones fed through an ozone generator 9. That is, a metal film oxidized with an abrasive which does not contain metallic ions can be removed. By this abrasion, the part, which is buried in the whole surface of the wafer 1 having a through-hole, of the W film 18 can be removed and a W plug 20 is formed.

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